

## The impact of organizational efforts on consumer concerns in an online context

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## **The impact of organizational efforts on consumer concerns in an online context**

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## **The impact of organizational efforts on consumer concerns in an online context**

### **Abstract**

As organizations spend a significant amount of their resources on online channels, it is vitally important to understand the effects of this cost on consumer behavior. The author developed and empirically tested an integrated model combining the effects of organizational efforts on consumer concerns, process satisfaction, and purchase intentions. The results of this effort suggested that consumers are still skeptical of the organizational efforts in an online context and their concerns remain a critical factor in influencing their satisfaction and purchase intention. The study provided insights for managers about how they may reduce shopping cart abandonment in online purchasing environment by focusing on consumer concerns.

**Key words:** Perceived risk, online trust, visual appearance, security concerns, privacy concerns, structural equation modeling

### **1. Introduction**

To create and sustain long-term and mutually beneficial online and offline relationships, organizations need to reduce consumers' perceived risk [6]; increase consumer trust [3] and lessen security and privacy concerns [10]. Addressing these *consumer concerns* is highly important because consumers increasingly rely on the internet for their regular information search and purchase. Recent cyber-attacks on high profile corporations' websites and consequent privacy breaches have made these consumers concerns even more important because in such an online context face-to-face interaction is absent, behavioral intentions of the firm is not clear, and often information is collected without the express consent of the consumer [15].

To alleviate these concerns about risk, trust, security, and privacy, organizations need a deeper understanding of how their efforts affect consumer concerns [7]. To achieve this, organizations focus on building a visually appealing website and attempt to reduce errors in information accuracy and website navigation. Additionally, extant research has suggested that brand image of an organization and its order management processes can positively influence consumer perceptions [21]. Based on such factors, it seemed necessary to perform research on the effects of four important organizational effort components: the visual appearance of a web-site, its order fulfillment process, its absence of errors, and its brand image.

Although, prior literature has highlighted the importance of consumer concerns and researchers have suggested potential antecedents and consequences of consumer concerns (see: [19]), the direct relationship between organizational efforts and consumer concerns and their simultaneous influence on process satisfaction and purchase intentions has yet to be explored. Additionally, there is a significant body of literature focusing on the online environment. However, researchers note that the online marketplaces have changed substantially recently and have emphasized the need to develop new frameworks which capture the realities of a changing consumption environment [2]. My study attempted to address this by offering insights into consumer perceptions of management controlled variables and their impact on consumer decision making“ specifically, by developing and empirically examining an integrative framework and asking: (a) What organizational efforts influence consumer concerns in online context and to what extent?; (b) What is the inter-relationship between the consumer-concern variables? And (c) How do consumer-concern variables affect process satisfaction and purchase intentions?

### **2. Conceptual framework and development of the hypotheses**

Online commerce allows organizations to collect and store information about their customer's characteristics (socio-demographics, search behavior clicking pattern, and actual shopping behavior). Consequently, policy makers and users have started to be concerned about risk, trust, security and privacy concerns associated with online purchase [13]. I decided to attempt to take a systemic approach to integrating such concerns into a single framework. Thus I posited that organizational efforts will influence consumer concerns which will, in turn, impact behavioral intentions; examining the interfunctional interactions between consumer concern variables.

## **2.1 Consumer concerns**

There are four consumer concerns that differentiate an online from in-store transaction [20]: (a) increased risk, (b) the resulting trustor and trustee relationship, (c) security concerns about financial information, and (d) subjective privacy concerns.

### **2.1.1 Perceived online risk**

This is here defined as the consumer's belief of the potential negative outcomes due to an online transaction [8]: the absence of face to face contact, and lack of opportunity to examine a product prior to purchase increases the perceived risk.

### **2.1.2 Online trust**

This is primarily based on trust of the selling organization, its infrastructure and its underlying control mechanisms. The *trustor* is the consumer browsing the website and the *trustee* is the organization and its website [5]. Online trust involves the website's ability to perform required functions (i.e. order fulfillment and absence of errors) [16]. Moreover, investment in developing a brand image can be critical in generating online trust.

### **2.1.3 Security and privacy**

There are two types of uncertainty in an online buying context: (a) system-dependent (due to exogenous events associated with potential technological errors and security gaps) and (b) transaction-specific [11] (endogenous activities associated with the organization and its behavior in the transaction process). *Security* concerns are mostly associated with the former of these while *privacy* concerns are associated with the latter.

## **2.2 The role of organizational efforts**

The study focused on four important organizational efforts: visual appearance of the website, order fulfillment, absence of error, and brand image, to address the potential theoretical and managerial implications. The conceptual framework is shown in Figure 1.

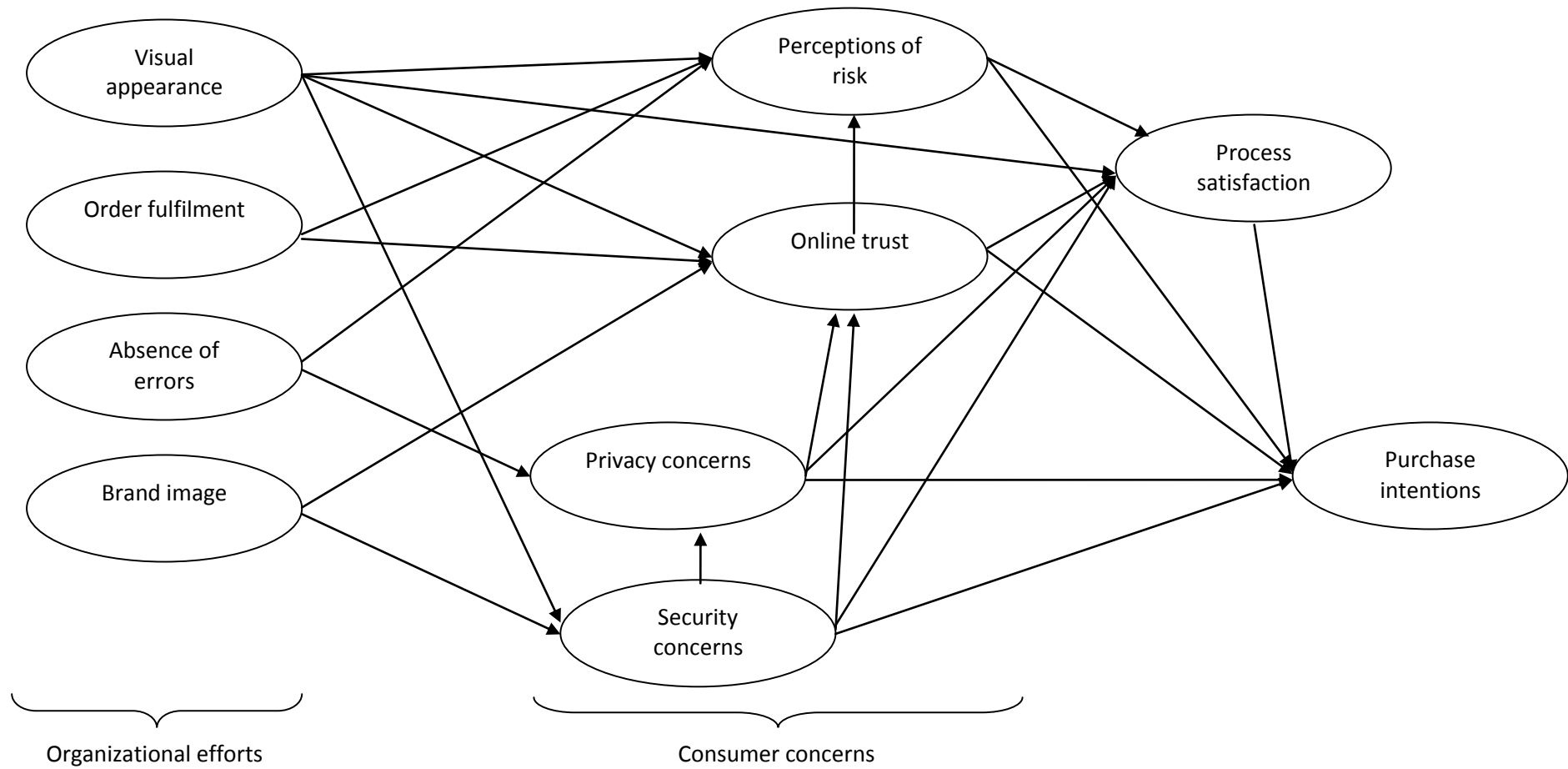


Figure 1: Model overview

### *2.2.1 Visual appearance*

This includes the layout, images and the look-and-feel of a website or store. Schlosser et al. [14] observed that it is a good indicator of performance to customers and may increase their satisfaction while transacting online. Since user interface of a website influences the experience of consumers interacting with a retailer's product or service offering, a well-designed website may increase consumer confidence [12] and in turn reduce consumers' perceptions of risk. Lim and Dubinsky [9] also showed that visual appearance of a website was a major driver behind online trust. Bart et al. [1] asserted that consumers may perceive reduction of mistrust when visiting websites that provide good features and layout as well as high-quality content. It seems reasonable to assume that a better looking website will lessen consumer hassle and reduce their security concerns. Therefore:

H1: Visual appearance of a website will (a) reduce the perception of risk, (b) increase online trust, (c) reduce security concerns, (d) increase process satisfaction among online consumers.

### *2.2.2 Order fulfillment*

One risk that consumers face in the online context is that the firm may overcharge or fail to deliver the product, or even deliver an inferior product. A product bought in a store provides instant possession. In order to increase customer confidence, organizations should provide regular updates on delivery of the order [18]. Order fulfillment may be an important determinant of reducing overall risk and increase online trust. Thus:

H2: Order fulfillment will (a) reduce the perception of risk, (b) increase online trust among online consumers.

### *2.2.3 Absence of errors*

Consumers expect that websites from which they buy have no errors. Consumers will perceive higher confidence surfing a website when it presents accurate details and information. Thus it was posited that the higher confidence generated due to the absence of errors on the website will reduce the overall privacy concerns and increase consumer willingness to share their personal information. Thus:

H3: Absence of errors will (a) reduce the perception of risk, (b) reduce privacy concerns among online consumers.

### *2.2.4 Brand image*

The literature underlines the importance of brand image in a shopping environment (see [4]). Studies have shown that consumers increasingly rely on such intangible aspects as brand image. Therefore.

H4: Brand image will (a) increase the online trust, (b) reduce the security concerns among consumers.

## ***2.3 Inter-relationships between consumer concern variables***

Existing studies have demonstrated that seals of approval, such as Verisign and TRUSTe have a positive effect on trustworthiness of a website and that poor security would affect consumers' privacy concerns and both concerns would significantly affect online trust. Thus:

H5: Security concerns will have a significant positive influence on privacy concerns.

H6: Online trust will be significantly influenced by (a) security, (b) privacy concerns.

H7: Perceived online risk will be significantly influence by online trust.

## **2.4 Consequences of consumer concerns**

### **2.4.1 Process satisfaction**

This is satisfaction derived by a consumer from the decision-making process prior to product purchase. Research results have suggested that it may be as important as *product satisfaction* in an uncertain environment. Capturing it is important for two major reasons. First, it is usually attributed to organizational efforts. Second, it is considered an integral part of overall satisfaction [17].

Consumer risk perceptions can have a significant impact of process satisfaction. Similarly, it is assumed that higher trust will lead to higher process satisfaction. Understanding the online consumers' decision-making process can help retailers design and deploy systems that better cater to the consumers' demands. If the organization addresses consumer security and privacy concerns, it may be able to increase the overall process satisfaction. Hence:

H8: Process satisfaction will be (a) negatively influenced by perception of risk, (b) positively influenced by online trust, (c) negatively influenced by privacy concerns, (d) negatively influenced by security concerns.

### **2.4.2 Purchase intentions**

Consumers' intentions to engage in online commerce has been considered to be a significant predictor of consumers' actual participation in e-commerce. To complete an online transaction, a consumer must provide sensitive financial details (e.g., personal information, including address, phone number, and credit card information) to an online interface rather than a human being. Moreover, consumers may have to wait days to receive the product. Thus the perception of risk, online trust and security concerns will have a significant impact on purchase intentions. Furthermore, it is posited that if the consumer is satisfied with the overall process, he or she may be more inclined to purchase goods. Therefore:

H9: Purchase intentions will be (a) negatively influenced by perception of risk, (b) positively influenced by online trust, (c) negatively influenced by privacy concerns, (d) negatively influenced by security concerns, (e) positively influenced by process satisfaction.

## **3. Methodology**

A quantitative methodology employing a self-administered structured questionnaire was used to measure and validate the hypothesized relationships. The data were collected online using a professional survey website. The link to the survey was placedt on one of the University WebPages and several professional websites. Visitors to these websites were requested to participate in the survey. The survey was geographically locked: only consumers arriving to the webpage from a UK IP address were asked to participate in the study (to avoid cross-cultural issues).

Of the 410 people who participated, the usable sample was 251 (61.2%). Respondents' ages ranged from 19 to 56 years, and 63.7% were female (the mean age was 32.3 years). More than 45% of participants used the internet for 20 hours or more per week and used online

shopping frequently with 49.8% of them involved in online purchases once a month or more. Respondents reported purchases of a wide selection of items, including books, music, audio and video devices, computers and laptops as well as accessories, fashion clothes, games and gaming systems, and groceries. Prices paid ranged from \$30 to \$2300.

Our survey used items that have been validated in prior research, with appropriate modifications in wording to suit our context. Table 1 shows the scales used to measure the latent constructs. Apart from the *process satisfaction* measure, items were taken from existing scales. For process satisfaction items, a convenience sample of 10 prospective online buyers was asked to make a purchase decision regarding a digital camera using a major online shopping site. On the basis of the verbal protocols generated during this purchase, several statements were compiled that corresponded to each construct. These were then assessed for face validity by 10 academics and graduate students at a UK university. All responses were based on a 7-point Likert type scale ranging from strongly disagree to strongly agree.

**Table 1:**  
**Measurement model**

|                               |   | Item reliability | AVE  | CR   | Alpha |
|-------------------------------|---|------------------|------|------|-------|
| <b>Perception of risk [8]</b> |   |                  | 0.63 | 0.76 | 0.75  |
| POR1                          | I am confident to shop on the site.   | 0.78             |      |      |       |
| POR2                          | Purchasing from this website would involve more risk when compared with buying in-store.          | 0.70             |      |      |       |
| POR3                          | I feel secure in purchasing products on this site.  | 0.68             |      |      |       |
| <b>Online trust [1]</b>       |   |                  | 0.73 | 0.80 | 0.80  |
| T1                            | This site appears to be more trustworthy than other sites I have visited.                         | 0.85             |      |      |       |
| T2                            | The site represents a company or organization that will deliver on promises made.                 | 0.78             |      |      |       |
| <b>Privacy concerns</b>       |   |                  | 0.89 | 0.92 | 0.94  |
| P1                            | Information regarding security of payments is clearly presented.                                  | 0.83             |      |      |       |
| P2                            | Information text regarding the site's use of cookies is clearly presented.                        | 0.90             |      |      |       |
| P3                            | I believe the company sponsoring this site will not use cookies to invade my privacy in any way.  | 0.89             |      |      |       |
| P4                            | The site explains clearly how my information will be shared with other companies.                 | 0.81             |      |      |       |
| <b>Security concerns</b>      |   |                  | 0.88 | 0.91 | 0.84  |
| S1                            | I am willing to use my credit card on this site to make a purchase.                               | 0.92             |      |      |       |
| S2                            | There were seals of companies stating that my information on this site is secure (e.g, Verisign). | 0.94             |      |      |       |
| S3                            | The site implements security measures to protect internet shoppers.                               | 0.76             |      |      |       |
| <b>Visual appearance [1]</b>  |   |                  | 0.72 | 0.84 | 0.85  |
| N1                            | The visual appearance and manner of the site is professional (not amateur looking).               | 0.69             |      |      |       |
| N2                            | The site displays a high level of artistic  | 0.73             |      |      |       |



|                                |  |      |      |      |      |
|--------------------------------|--|------|------|------|------|
|                                | sophistication/creativity.   |      |      |      |      |
| N3                             | There are useful links to other sites that aid the primary purpose of coming to this site.   | 0.74 |      |      |      |
| N4                             | The site features are state-of-the-art, better than most sites in this industry.   | 0.75 |      |      |      |
| N5                             | The site feels warm and comforting.  | 0.65 |      |      |      |
| <b>Order fulfillment [1]</b>   |  |      | 0.78 | 0.86 | 0.95 |
| OF1                            | The site appears to offer secure payment methods.  | 0.71 |      |      |      |
| OF2                            | Return policies or other measures of accountability are present.   | 0.80 |      |      |      |
| OF3                            | Shipping and handling costs are listed up front.   | 0.75 |      |      |      |
| OF4                            | Once an order is placed, it can be tracked to see where it is in the shipping process.   | 0.72 |      |      |      |
| OF5                            | Order confirmation is given via e-mail.  | 0.74 |      |      |      |
| <b>Absence of errors [1]</b>   |  |      | 0.82 | 0.89 | 0.92 |
| AE1                            | The internet links were in working order.  | 0.72 |      |      |      |
| AE2                            | There were no busy server messages.  | 0.79 |      |      |      |
| AE3                            | There were no pages "under construction".  | 0.76 |      |      |      |
| AE4                            | The download time was acceptable.  | 0.84 |      |      |      |
| AE5                            | All text and menus displayed properly.   | 0.81 |      |      |      |
| AE6                            | All features of the site could be used without the requirement to download programs (such as downloading a "flash" program to watch video or to hear music). | 0.61 |      |      |      |
| <b>Brand image [1]</b>         |  |      | 0.85 | 0.90 | 0.92 |
| B1                             | I am familiar with the company whose site this is.   | 0.78 |      |      |      |
| B2                             | I can recognize this site's brand name among other competing brands.   | 0.83 |      |      |      |
| B3                             | I am generally familiar with other brands (products and services) being advertised on the site.  | 0.88 |      |      |      |
| B4                             | I can quickly recall the symbol or logo associated with this site.   | 0.81 |      |      |      |
| <b>Process satisfaction</b>    |  |      | 0.90 | 0.93 | 0.87 |
| SL1                            | I am happy with refund and return policy on this site.   | 0.78 |      |      |      |
| SL2                            | I am happy with warranty of product on this site.  | 0.87 |      |      |      |
| SL3                            | The site allows me to buy at my own pace.  | 0.87 |      |      |      |
| SL4                            | I can save my shopping preferences on this site.   | 0.91 |      |      |      |
| SL5                            | I am happy with the site that allows me to create products or services to exactly fit my needs.  | 0.81 |      |      |      |
| <b>Purchase intentions [8]</b> |  |      | 0.86 | 0.90 | 0.90 |
| PI1                            | I am likely to purchase products on this site.   | 0.85 |      |      |      |
| PI2                            | I would recommend this site to my friends.   | 0.84 |      |      |      |
| PI3                            | I would book mark this site for future purchases.  | 0.75 |      |      |      |
| PI4                            | I would not mind creating a personalized account on this site.   | 0.88 |      |      |      |

Note: All factor loadings are statistically significant at  $p < 0.01$ .

#### 4. Results

Data analysis was conducted using LISREL 8.8.

Before estimating the structural model, confirmatory factor analysis was employed to test the internal consistency of the scales. To estimate the relationship between perceptions of organizational efforts, consumer concerns and behavioral intentions, a measurement model was first tested. It demonstrated high levels of internal consistency, convergent validity, and discriminant validity for each construct.

Overall, the measurement model with 43 indicators achieved an excellent fit. Coefficient alpha for the constructs ranged from 0.78 to 0.94 and the Average Variance Extracted (AVE) ranged from 0.63 to 0.90. The details of measurement model statistics are shown in table 1. To assess the discriminant validity the AVE was compared with the variance shared between all construct pairs. This test determines whether the scale possesses discriminant validity when the average variance extracted by the underlying latent variable is greater than the shared variance of one latent variable with another. As Table 2 shows, this criterion was met by all but one pair of constructs (risk and trust) of the 45 pairs tested. The composite reliability (Table 1) was found to be above 0.7 across the constructs, exceeding the recommended threshold value. This also provided strong evidence of discriminant validity. Looking at the overall reliability and validity results, it appeared that the scales measure distinct model constructs.

**Table 2:**  
**Correlations matrix**

|    | VA          | OF          | AE          | BI          | PR          | OT          | PC          | SC          | PS          | PI          |
|----|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| VA | <i>0.85</i> |             |             |             |             |             |             |             |             |             |
| OF | 0.57        | <i>0.88</i> |             |             |             |             |             |             |             |             |
| AE | 0.52        | 0.64        | <i>0.91</i> |             |             |             |             |             |             |             |
| BI | 0.50        | 0.51        | 0.43        | <i>0.92</i> |             |             |             |             |             |             |
| PR | 0.61        | 0.59        | 0.57        | 0.44        | <i>0.79</i> |             |             |             |             |             |
| OT | 0.57        | 0.47        | 0.39        | 0.58        | 0.71        | <i>0.85</i> |             |             |             |             |
| PC | 0.53        | 0.51        | 0.55        | 0.42        | 0.59        | 0.29        | <i>0.94</i> |             |             |             |
| SC | 0.45        | 0.36        | 0.31        | 0.51        | 0.44        | 0.40        | 0.45        | <i>0.94</i> |             |             |
| PS | 0.54        | 0.52        | 0.48        | 0.50        | 0.69        | 0.53        | -0.36       | 0.54        | <i>0.95</i> |             |
| PI | 0.47        | 0.58        | 0.50        | 0.37        | -0.65       | 0.36        | -0.54       | 0.45        | 0.43        | <i>0.93</i> |

Note: Numbers in italics represent the square root of average variance extracted.

VA = visual appearance, OF = order fulfillment, AE = absence of errors, BI = brand image, PR = perception of risk, OT = online trust, PC = privacy concerns, SC = security concerns, PS = process satisfaction, PI = purchase intentions.

Using the measurement model, the original structural model of figure 1 was estimated (see Table 3). The baseline model (Model 1) fit the data well but, 8 of the proposed 23 structural parameters were found to be non-significant. Therefore, several alternative models were considered. Removing 8 paths from the model (resulting in Model 2) had a non-significant impact on fit ( $\Delta\chi^2 = 19$ ,  $\Delta d.f. = 0$  8), therefore they were deleted. As two of the consumer concern variables relationships were removed among the 8 paths (those from security and privacy concerns to trust), the other two relationships were also removed to see if that improved the overall model. Assuming there was no relationship between consumer concern variables (Model 3) resulted in a worse fit ( $\Delta\chi^2 = 93$ ,  $\Delta d.f. = 0$  10). Thus Model 2 with all non-significant paths removed from the baseline model was deemed the best fit.

**Table 3:**  
**Alternate model testing**

| Model number | Model estimated                           | $\chi^2$ | d.f. | RMSEA | SRMR  | NFFI | CFI  | $\Delta\chi^2$ | $\Delta$ d.f. |
|--------------|---|----------|------|-------|-------|------|------|----------------|---------------|
| 0            | Measurement model                         | 1030     | 644  | 0.049 | 0.05  | 0.98 | 0.99 |                |               |
| 1            | Baseline model                            | 1060     | 660  | 0.049 | 0.053 | 0.98 | 0.98 | 31             | 16            |
| 3            | All non-significant paths removed         | 1080     | 668  | 0.050 | 0.055 | 0.98 | 0.98 | 19             | 8             |
| 4            | No causal paths between consumer concerns | 1155     | 670  | 0.054 | 0.073 | 0.98 | 0.98 | 97             | 10            |

Table 4 shows the path coefficients and t-values associated with the Model 2. The revised model depicting the relationships is shown in figure 2.

**Table 4:**  
**Best fitting model path coefficients**

|    |     | Path  | Std. Est. | T-value | P-value |
|----|-----|---|-----------|---------|---------|
| 1  | H1b | Visual appearance -> Online trust           | 0.44      | 5.53*   | 0.000   |
| 2  | H1c | Visual appearance -> Security concerns      | -0.30     | -4.00*  | 0.000   |
| 3  | H2a | Order fulfillment -> Perceptions of risk    | 0.37      | 4.76*   | 0.000   |
| 4  | H3a | Absence of errors -> Perceptions of risk    | -0.22     | -2.99*  | 0.002   |
| 5  | H3b | Absence of errors -> Privacy concerns       | -0.53     | -7.86*  | 0.000   |
| 6  | H4a | Brand image -> Online trust                 | 0.42      | 5.73*   | 0.000   |
| 7  | H4b | Brand image -> Security concerns            | 0.44      | 5.96*   | 0.000   |
| 8  | H5  | Security concerns -> Privacy concerns       | 0.37      | 5.62*   | 0.000   |
| 9  | H7  | Online trust -> Perceptions of risk         | 0.44      | 5.06*   | 0.000   |
| 10 | H8a | Perceptions of risk -> Process satisfaction | -0.70     | -7.33*  | 0.000   |
| 11 | H8c | Privacy concerns -> Process satisfaction    | -0.16     | -2.66*  | 0.008   |
| 12 | H8d | Security concerns -> Process satisfaction   | 0.37      | 6.18*   | 0.000   |
| 13 | H9a | Perceptions of risk -> Purchase intentions  | -0.76     | -5.65*  | 0.000   |
| 14 | H9b | Online trust -> Purchase intentions         | 0.35      | 3.99*   | 0.000   |
| 15 | H9c | Privacy concerns -> Purchase intentions     | -0.23     | -3.97*  | 0.000   |
| 16 | H9e | Process satisfaction -> Purchase intentions | 0.30      | 4.50*   | 0.000   |

\* Significant at  $p < 0.01$ .

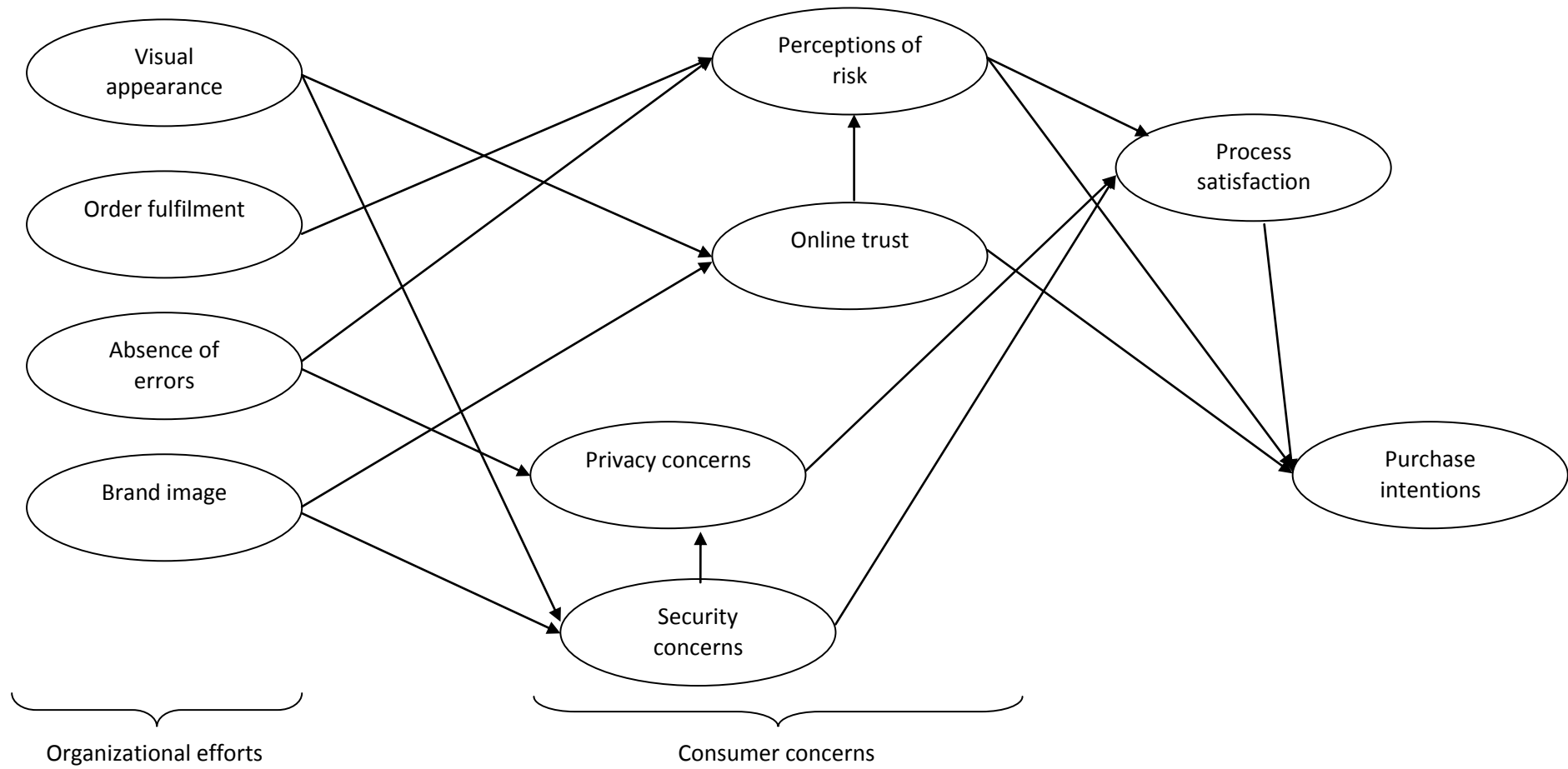


Figure 2: Revised relationships based on the best fitting model

The results confirm the significant effects of visual appearance on increasing online trust (H1b,  $\beta = 0.44$ ; t-value = 5.3) and reducing security concerns (H1c,  $\beta = -0.30$ ; t-value = -4.0). The direct positive influence of order fulfillment on perceptions of risk (H2a,  $\beta = 0.37$ ; t-value = 4.86) is surprising. Absence of errors was found to be influential in consumer concerns relating to perceptions of risk (H3a,  $\beta = -0.22$ ; t-value = -3.0) and privacy concerns (H3b,  $\beta = -0.53$ ; t-value = -7.9). It was observed that brand image did increase online trust ( $\beta = 0.42$ ; t-value = 5.7) supporting H4a. However, another surprising result was seen as positive influence of brand image was observed on security concerns ( $\beta = 0.44$ ; t-value = 6.0). It was observed that security concerns had significant influence on privacy concerns supporting H5 ( $\beta = 0.37$ , t-value = 5.6). Similarly, significant influence of online trust on perceived risk was also observed supporting H7 ( $\beta = 0.44$ ; t-value = 5.1).

The results demonstrate a significant relationship between perception of risk and process satisfaction ( $\beta = -0.70$ ; t-value = -7.3) thus supporting H8a. Similarly, H8c was supported as significant negative relationship was observed between privacy concerns and process satisfaction ( $\beta = -0.16$ ; t-value = -2.7). The relationship between security concerns and process satisfaction was positive ( $\beta = 0.37$ ; t-value = 6.2) which is against the hypothesized relationship.

The relationship between perception of risk and purchase intentions was significant and negative ( $\beta = -0.76$ ; t-value = -5.7) lending support to H9a. The relationship between online trust and purchase intentions was positively significant ( $\beta = 0.35$ ; t-value = 4.0), thus supporting H9b. The hypothesis H9c was also supported as significant negative influence of privacy concerns on purchase intentions was observed ( $\beta = -0.23$ ; t-value = -4.0). It was observed that process satisfaction significantly influenced purchase intentions ( $\beta = 0.30$ ; t-value = 4.5).

## 5. Discussion & conclusion

By developing and empirically testing an integrated framework which offers simultaneous testing of multiple antecedents and consequence of consumer concerns the study has (a) provided a better understanding of how consumers perceive organizational efforts and how such efforts affect consumers concerns in the online context; (b) shown the interaction between consumers concerns and (c) explored the effects of consumer concerns on process satisfaction and purchase intention. This has resulted in a comprehensive framework that integrates multiple standards of comparison into a single framework and provides a better understanding of consumer behavior in an online environment.

### 5.1 Implications for theory and research

#### 5.1.1 Effect of organizational efforts on consumer concerns

The effect of the visual appearance of websites is significant in influencing online trust and security concerns. Good website appearance increases trust and reduces security concerns. A site which is visually more welcoming will reduce consumer security concerns and increase online trust.

There is a positive relationship between order fulfillment and perceptions of risk. This is a surprising result. This may be a result of the ownership delay occurring between the time an order is placed and the time the goods are delivered. The results indicated that consumers remain anxious till the physical delivery of the product.

The importance of relevant and clear linkages within a website is highlighted by the relationship between absence of errors and perceptions of risk as well as privacy concerns. The higher the number of errors on a website, the higher the risk consumers felt and the higher their privacy concerns. The organization should continuously strive to build a visually appealing, creative and professional looking website and at the same time should make sure that it is free of errors. The effect of brand image on consumer concerns is also important because it helps explain a consumer's association with a brand in an online context. The model shows that although investment in building a better brand image increases online trust, it does not lessen consumer security concerns.

#### 5.1.2 Interaction among consumer concern variables

The study also empirically demonstrated the interaction among consumer concern variables. The interrelationships showed that security concerns affected privacy concerns and that the influence of online trust on perceived risk was worthy of attention. If an organization can increase trust in their online engagement with consumers, the risk the consumer perceives will be reduced. Thus the consumer will have a higher tendency to purchase from the organization. The visual appearance and brand image component also become critically important as they have a significant influence on increasing online trust.

#### 5.1.3 Effect of consumer concerns on behavioral intentions

Our study measured two important consequences of consumer concerns: process satisfaction and purchase intentions. By distinguishing between them, it was possible to show that the means-end linkages work in an online context, demonstrating that process satisfaction is an important measure for online context. Higher perceived risk and privacy concerns lead to lower process satisfaction; and higher process satisfaction leads to higher purchase intention.

### 5.2 Managerial implications

For online retailers, shopping basket abandonment is a critical problem. It is not difficult to imagine situations wherein consumer concerns may increase due to visually non-appealing website, multitudes of errors, unclear order management process and lack of investment in building a brand image online. Managers should attempt to increase consumer process satisfaction and purchase intentions by reducing consumer concerns.

Our results suggest that if a firm clearly communicates the actions it takes to secure its online platform, consumers may have lower privacy concerns and therefore be willing to provide more personal information, helping the firm in its marketing campaign. This is especially important in major corporations.

### 6. Limitations

Our results show that consumers are still skeptical of online purchase process in the UK. However this cannot be assumed to be true elsewhere. Also there may be industry specific efforts that were not included in the sample. Additionally, sub-components of visual appearance such as color, menu design, flow and structure and their resultant influence on consumer concerns were not analyzed. As the numbers of internet users grow worldwide, the growth in online purchases will follow. The framework equally may not be useful in a cross-national context. Also experiments focusing on product *versus* service purchase may provide different results.

### 7. Substantive contributions

A key contribution of the study is that it provided empirical confirmation of multiple organizational efforts and their simultaneous impact on consumer concerns and behavioral intentions. In addition, the findings highlighted the impact of each organizational effort on consumer concerns. This in turn provides managers with distinct strategic directions in using their online investment to alleviate consumer concerns. The findings also showed the importance of trust in reducing perceived risk. The visual appearance of a website and its brand image were shown to be critically important as they had a significant influence on building online trust. Overall, the study integrated complex linkages in consumers' minds in an online context and demonstrated that organizational efforts directed towards minimizing the consumer concerns can have valuable results for all of its stakeholders.

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